

## Claims

1. A surgical thread to be used for plastic, dermatological, cosmetic, operations as well as for general surgery, emergency surgery, and all of specialized surgeries, characterized in that it is provided with inclined projections or thorns or hooks or protrusions that are distributed along at least one spiral.

2. The surgical thread according to the preceding claim, characterized in that said projections or thorns are arranged in sequences which are alternately inclined to opposed directions so as to prevent the thread from slipping or moving to both opposed directions.

3. The surgical thread according to claim 1, characterized in that said divergent or opposed thorns or protrusions are distributed along two opposed spirals having opposed directions, one right-handed spiral directed to the clockwise direction from the right end to the left end, and the other left-handed spiral directed to the anti-clockwise direction from the left end to the right end.

4. The surgical thread according to claim 1, characterized in that the thorns are distributed over three spirals shifted  $120^\circ$  out of phase to one

another.

5        5. The surgical thread according to claim 1, characterized in that the thorns are distributed according to four spirals shifted 90° out of phase.

10       6. The surgical thread according to claims 1 and 2, characterized in that there is provided at least one repetition unit, which is the portion of thread between two left and right ends, with a middle point Pm at which the thorns invert their own inclination giving rise to two opposite sequences of thorns directed to opposed directions.

15       7. The surgical thread according to the preceding claim, characterized in that the length of the repetition unit is between 2 cm and 60 cm.

20       8. The surgical thread according to claim 6, characterized in that the length of the repetition unit is constant all over the length of the thread.

25       9. The surgical thread according to claim 6, characterized in that the length of the repetition unit is not constant all over the length of the thread so as to increase or decrease the density of the thorns in some portions of the thread and to provide a differentiated gathering according to the type of soft tissue crossed.

10. The surgical thread according to claim 6, characterized in that each repetition unit is separated from the following unit by a short length of thread without thorns.

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11. The surgical thread according to the preceding claims, characterized in that the section of the thread is constant apart from its shape.

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12. The surgical thread according to claims 1 to 10, characterized in that its section is increasing and/or decreasing.

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13. The surgical thread according to the preceding claims, characterized in that the pitch of the thorns on the axis of the thread is constant.

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14. The surgical thread according to the preceding claim, characterized in that the pitch of the thorns is between 0.50 mm and 17.20 mm.

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15. The surgical thread according to claims 1 to 12, characterized in that the pitch of the thorns is varying according of the Fibonacci's series referred to the order of magnitude of the thread's thickness.

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16. The surgical thread according to claim 1, characterized in that it consists of a straight thread which is caused to take a permanent spiral shape with a well-defined inner diameter giving it elastic

characteristics, the thorns of said thread having a straight or spiral course.

5 17. The surgical thread according to claims 1 to 15, characterized in that a spiral thread with a lower diameter is wound about the thread provided with thorns, the inner gauge of the spiral being at least the same as the diameter of the needle by which said thread is inserted into the tissues.

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18. The surgical thread according to the preceding claims, characterized in that the length of the thorns or projections is between 0.3 and 5.5 mm.

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19. The surgical thread according to the preceding claims, characterized in that the cutting angle of the thorns is between 10° and 70°.

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20. The surgical thread according to the preceding claims, characterized in that the thorns have the shape of a fishbone.

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21. The surgical thread according to claims 1 to 19, characterized in that the thorns have the shape of an ear of wheat.

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22. The surgical thread according to claims 1 to 19, characterized in that the thorn has the shape of a microturn.

23. The surgical thread according to the preceding claims, characterized in that the thorns have a spiral course.

5 24. The surgical thread according to the preceding claims, characterized in that it is made of reabsorbable material.

10 25. The surgical thread according to the preceding claims, characterized in that it is made by die-casting.

15 26. The surgical thread according to claims 1 to 25, characterized in that it is made by applying nanotechnology techniques.